

# STANFORD UNIVERSITY MEDICAL CENTER

## DEPARTMENT OF GENETICS

April 18, 1977

Mr. David Feinman  
109 E. Lynch St.  
Durham North Carolina 27701

Dear Mr. Feinman,

I have gleaned a few things from my files which possibly more to do with the scientific substance than the political background of the establishment of exobiology programs. However, I hope they may be of some use to you, either as primary sources or by giving you some fairly obvious leads to other sources of information.

Richard S. Young at NASA headquarters (202-755-3732) is probably the most knowledgeable person that you could contact. He has been connected with this effort from the inside almost from the very beginning.

The National Academy of Sciences, through the Space Science Board, has been the principal and very important source of scientific advice to NASA from its very inception. This may be connected with the roles of Lloyd Berkner, who was also a prime mover for the International Geophysical Year, and of Hugh Dryden, who was home secretary for the Academy, and director of NACA and then NASA at its inception. The files of the Space Science Board, which is a still continuing body, would then be a another very important source of documentation. ①

As you can see, my own first entry to this arena was also through the NAS, and I had the feeling, which I believe was reasonably well substantiated, that this was the primary constituency for scientific policy formation. If there were any issue on which I could get a substantial consensus from within the Board and the Academy, I felt that the administration would be eager to be responsive. Whether this applies to the highest level of political decisions - like the one to adopt Apollo as the national space mission - is perhaps the only one to remain problematical.

Besides the board and its subcommittees, NASA also had a large number of its own scientific advisory panels, which were characterized by a larger participation from within the agency. There was a good deal of interlinking among these different groups, but not to the extent that they inhibited the aggregation of a very wide variety of inputs from throughout the scientific community.

In addition, NASA had to defend its program before Congress every year, and you will find the annual program presentations, before the respective Congressional authorization and appropriation committees, the source of primary documentation for the evolution of NASA's scientific programs. Scientists were frequently asked to testify before these committees, usually at the instance of the secretariat of the Space Science Board.

In addition, programmatic proposals were being very actively developed at a technical level, at NASA's own research centers. The one I had most contact with was the Jet Propulsion Laboratory, which was involved very

*Especially in annual reviews  
of NASA program documents.*

early in the game, even in the WESTEX committee, and then in various proposals that were submitted involving various degrees of collaboration for specific space missions.

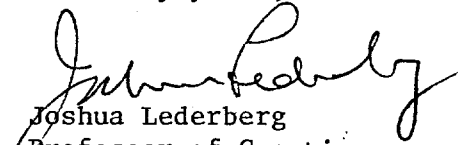
Other programmatic inputs came from unsolicited proposals from private industry and from academic institutions. ②

If you have articulated any further concrete questions on which I could be any help, please don't hesitate to write me again.

I'm sure you know the various books that have been written about the Apollo mission: for example, Kennan and Harvey, Mission to the Moon, and Logsdon, The Decision to Go to the Moon. I note that on page 51, Logsdon also refers to an essay by Schoettle, "The Establishment of NASA," in Sanford A. Lakoff, ed., Knowledge and Power: Essays on Science and Government (New York: Free Press, 1966).

The more recent work that I mentioned to you over the phone is The Subjective Side of Science: A Philosophical Inquiry into the Psychology of the Apollo Moon Scientists by I.I. Mitroff, Elsevier Press, 1974. This is an examination of the scientific debates about the interpretation of Apollo sample data. There have been a number of critical reviews of the book that you can readily find by scanning the Social Science Citation Index. Certainly the context with which this group operated can hardly be regarded as typical of the scientific enterprise. As I scan its bibliography, I find that it is probably not quite as informative on organizational questions as I had thought, but you still may find it useful to look through it.

Sincerely yours,

  
Joshua Lederberg  
Professor of Genetics

② and in international discussions  
at COSPAR, and through NASA's  
intl. affairs office.